

Date and Mean Time.				Sidereal Time.	No. of Measures.	Apparent Distance.	Distance reduced to mean distance of Neptune (30°05508).	Position-Angle.	Observer.	
1897. d	h	m	s	h	m	s		°	'	
Dec. 20	10	53	36	4	52	42	16	17°92	17°23	W. B.
	10	50	57	4	50	3	4	...	77 26	„
22	9	24	30	3	31	16	10	11°82	11°36	B.
	9	24	15	3	31	0	8	...	309 10	„
	10	21	20	4	28	14	10	11°55	11°11	L.
	10	21	22	4	28	17	5	...	303 4	„
23	9	56	5	4	6	51	10	17°28	16°62	„
	9	55	43	4	6	29	5	...	249 59	„
24	10	11	17	4	26	3	20	13°29	12°78	W. B.
	10	6	34	4	21	19	4	...	207 21	„
28	9	46	15	4	16	43	20	13°66	13°15	„
	9	47	3	4	17	33	4	...	292 57	„
1898. Jan. 10	9	38	22	5	0	4	10	16°17	15°61	L.
	9	30	12	4	51	53	4	...	240 16	„

Royal Observatory, Greenwich :  
October 1900.

Corrections to the Armagh Catalogue for 1840.  
By J. L. E. Dreyer, PhD.

Most of the corrections to the Armagh Catalogue given below are the results of an examination of the reductions of a number of stars made two years ago at the request of Professor Auwers. In addition to the ordinary arithmetical errors likely to occur in a vast amount of figure work, the Armagh star-places are not infrequently vitiated by errors for which the peculiar method of reduction adopted by Dr. Robinson is responsible. The right ascension of every star to be determined was taken from some catalogue (at first Piazzi or the A.S.C., later often the B.A.C.), brought up to the beginning of the year and reduced to apparent place, and this "assumed R.A." was then compared with the observed time of meridian transit. The result of this comparison was a clock error, and the difference between that and the clock error found by standard stars was adopted as the "correction to assumed R.A." of the star in question. Similarly in N.P.D. the comparison gave an "index error," the difference of which from the index error found by the nadir observation gave the "correction to assumed N.P.D." It is obvious that this roundabout way of reducing the observations gave abundant opportunities of

blundering. For instance, not a few errors were introduced by the computers, in the course of years, taking the assumed place of a star from different catalogues and then overlooking this when making up the final catalogue, so that the mean of the "corrections to assumed place" in some instances was applied to a star-place which was not that to which some of the individual corrections really corresponded.

In addition to the copious list of errata given at the end of the catalogue,\* there is a further list at the end of the *Second Armagh Catalogue*, in which for No. 1035 read No. 1435, while the N.P.D. of the star is  $31^{\circ} 29' 51''.87$ .

The following list contains all the corrigenda noticed since 1886 :—

No. 540. On p. 67, the single results in P.D. should be :

$$\begin{aligned} & -0.90 \\ & -1.47 \\ & +0.33 \\ & +0.30; \end{aligned}$$

and the final N.P.D. is  $82^{\circ} 15' 38''.29$ .

No. 576. On p. 71, the single results in R.A. should be :

$$\begin{aligned} & \text{S} \\ & +0.12 \\ & -0.18 \\ & -0.06 \\ & +0.57; \end{aligned}$$

and the final R.A. should be  $2^{\text{h}} 31^{\text{m}} 9^{\text{s}}.60$ .

No. 585. The result in P.D. on 1844 December 2 should be  $+0''.78$ , and the final N.P.D.  $41^{\circ} 27' 11''.16$ .

Nos. 1373, 1389. 36 *Camelopardalis* and *Radcliffe* 1661. The observer at the Mural Circle never saw more than one star. On 1840 March 5 and 1841 February 20 he certainly observed the preceding star, and on 1839 February 10, 1840 February 13, 1844 February 16, and 1851 January 2 he certainly observed the following one; but on the other nights it is impossible to say which he observed, as he did not give the minute of P.D., and the stars differ nearly  $1'$  in P.D. There seem to be no errors in the reductions.

No. 1945.  $\iota$  *Cancer*. 1834 February 24, only *Procyon* and *Pollux* observed for time, and there must be some error in the observation of *Procyon*. The clock error taken from *Pollux* only

\* It may seem superfluous to draw attention to this, but experience shows that astronomers frequently overlook lists of errata. Sir John Herschel, for instance, when preparing his *General Catalogue of Nebulae*, seems to have taken no notice of the errata given in his own Cape Observations.

agrees perfectly with the rate of the clock from February 23 and 25. Adopting this, we get for the stars observed this evening :

		Correction to Assumed Place. s	Final R.A. in Catalogue. s
1945	$\iota$ Cancri	+0.41	0.30
2406	$\chi$ Leonis	+0.34	45.67
2433	69 „	+0.05	34.03
2454	76 „	+0.45	42.15
2469	$\iota$ „	+0.54	34.73
2484	$\tau$ „	+0.20	42.37
2648	$c$ Virg.	+0.56	13.52

No. 2457.  $\delta$  Crateris. Confusion in the assumed places in N.P.D. The mean result is  $103^{\circ} 54' 47''.54$ .

No. 2507. Approximate P.D. =  $19^{\circ} 50'$ .

No. 2899. The first result in R.A. should be  $+0^{\text{s}}.05$ ; final mean,  $13^{\text{h}} 27^{\text{m}} 38^{\text{s}}.54$ .

No. 3060. Minute of P.D. is  $27'$ .

No. 3240.  $\nu^2$  Boötis. Always hurriedly observed in R.A. after 52 Boötis.

No. 4003. Observed after 55 Draconis; no estimate of N.P.D. given. According to Schröter, of Christiania (*A. N.* 3527), it is not on the parallel of 55 Draconis.

No. 4698. Seconds of N.P.D.,  $46''.69$ .

No. 4781. For single results, see p. 832.

No. 5003. Observation of 1838 November 11 (over one wire and through clouds) should be rejected. This makes seconds of R.A. =  $58^{\text{s}}.11$ .

No. 5175. Single results in N.P.D. should be  $+2''.75$  and  $+5''.30$ , and N.P.D. =  $67^{\circ} 28' 31''.51$ .

No. 5181. On p. 627, for  $4''.76$  read  $+10''.18$ . Seconds of P.D. are  $6''.15$ .

### *On the Variable Velocity of a Persei.* By H. F. Newall.

From measurements which have been made of photographs recently taken at the Cambridge Observatory, it appears that a *Persei* has a variable velocity in the line of sight.

Eleven photographs were secured during 1900 September and October with the large four-prism spectroscope that was used in the observations of *Capella*. The spectra are taken with a long camera, and the linear dispersion is 6 tenth-metres per millimetre. The spectra are measured with a Zeiss micrometer, which is so arranged that ten revolutions of the micrometer screw correspond to 1 millimetre; thus one revolution of the micrometer corresponds to 0.6 tenth-metre, and there is not much